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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/479,852 | 01/07/2000 | ELFIDO COSS JR. | 2000.021100 | 3612 |

23720 7590 01/30/2003

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EXAMINER

SWINDELL, WALTER R

ART UNIT PAPER NUMBER

2125

DATE MAILED: 01/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/479,852

Applicant(s)

COSS JR. ET AL.

Examiner

Walter R Swindell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2003.
- 2a) ☒ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is a final action in response to the applicant's amendment (Paper No. 5) to application 09/479,852 received in the Patent Office on 16 January 2003.
2. Claims 1-36 are pending in the application. Claims 23, 30, and 35 have been amended. These amended claims dealt only with corrections to typographical errors and have been entered.

Response to Amendment

3. The abstract correction made in reference to item 2 of the previous office action, entered into the file on 21 January 2003, pertaining to the aforementioned application has been reviewed and accepted.
4. The drawing corrections made in reference to item 4 of the previous office action, entered into the file on 21 January 2003, pertaining to the aforementioned application have been reviewed and accepted.
5. The applicant's corrections made in reference to items 8-10 of the previous office action, entered into the file on 21 January 2003, pertaining to the aforementioned application have been reviewed and accepted.

Restatement of Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-36 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,002,989 to Shiba et al. (hereinafter "Shiba")(first published October 14, 1997).

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8. Shiba teaches all of the features of the claimed method and system. Shiba teaches a method and system for quality control where inspection frequency of inspection apparatus is reset to minimize expected total loss based on derived frequency function and loss value.
9. Regarding claims 1-6, Shiba teaches a method for dynamically generating trace data reports in a semiconductor fabrication process employing fault detection control including: receiving specified data for a trace data report, the specified data including at least one of a parameter, a trigger, and a frequency for the trace data report (col. 3, ln. 62 – col. 4, ln. 16; and FIG. 4); automatically generating from a fault detection controller a request to a report generator for the trace data report, the request including the specified data (col. 6, lns. 12-24); formulating the trace data report responsive to the request (col. 6, lns. 30-64); and returning the formulated trace data report from the report generator based on the request (col. 8, lns. 10-63). Shiba also teaches: receiving the specified data by manual input (col. 12, lns. 4-20); consulting a data store for available parameters with the data store include at least one of a database, a list, and a file, and the data store populated with the available parameters (col. 5, ln. 51 – col. 6, ln. 7); and formulating the trace data report with specified data gathered from a fabrication tool (col. 11, ln. 7 – col. 12, ln. 35).
10. Regarding claims 7-22, Shiba teaches the computer programmed method, as well as the computer-readable, program storage medium performable method, as described above with respect to claims 1-6. Shiba further teaches placing the report generator on one or more computers (FIG. 4, and col. 5, ln. 51 – col. 6, ln. 7).
11. Regarding claims 23-29, Shiba teaches a semiconductor fabrication processing system including: a fabrication tool capable of providing at least one of specified data and a trace data report (FIG. 4, tool(s) 1; and col. 8, lns. 52-62); a fault detection controller implementing a fault detection control, the fault detection controller being capable of automatically generating a request for the trace data report, the request including the specified data (FIG. 4, controller 4; and col. 6, lns. 12-24); a report generator capable of requesting at least one of the specified data and the trace data report from the fabrication tool and capable of, if the specified data is requested from the fabrication tool, providing the trace data report

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(FIG. 4, generator 6; and col. 6, Ins. 30-64); and an operator interface for receiving specified data from the trace data report, the specified data including at least one of a parameter, a trigger, and a frequency for the trace data report, and to which the trace data report may be returned from at least one of the report generator and the fabrication tool (FIG. 4, interface 7; and col. 8, Ins. 10-63, and FIGs. 5-8). Shiba also teaches displaying using a graphical user interface (see FIGs. 9-18); using a data store and populating the data store (col. 3, ln. 62 – col. 4, ln. 16); and employing the system on one or more computers (see FIG. 4).

12. Regarding claims 30-36, Shiba teaches an advanced process control system with means as described above with respect to claims 23-29.

Response to Arguments

13. Applicant's arguments filed 16 January 2003, with respect to claims 1-36, have been fully considered but they are not persuasive.

14. Applicants argues that the patentable novelty presented by the claims in view of the state of the art disclosed by Shiba is the data never makes it into any kind of report. More specifically, applicant argues that Shiba 1) does not gather trace data; 2) never puts the data that it does gather into reports; and 3) does not teach formulating reports.

15. Applicant's arguments are more specific than the claim language. The failure mode data of Shiba includes information, "such as, for example, size and feature of extraneous substances, coordinates of positions of extraneous substances on the wafer and the total number of extraneous substance obtained by the respective inspection apparatuses are collected into a data collection system" (col. 5, Ins. 56-61). The trace data of the claimed invention encompasses similar variables, as typified on page 6, Ins. 15-30 of the disclosure. The data gathered is embodiment specific, and as taught in Shiba, the data can be one or more variables, which are measured over time intervals/inspection frequency (col. 3, ln. 62 – col. 4, ln. 16). Further, with regard to the gathering of data for reports, and formulating reports, Shiba teaches the

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collating of data into various reports, e.g. diagrams, as indicated in the previous office action. The reports of Shiba are taught in some detail by the discussion of FIGs. 5-8.

16. Therefore, Shiba provides ample teachings of all of the elements of the currently pending claims. The diagrams of Shiba constitute a teaching of reporting, that is, providing information, is inherent in Shiba. Applicants have not overcome the teachings of Shiba.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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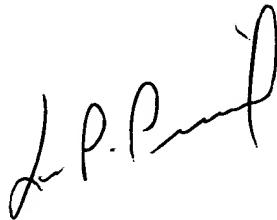
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter R Swindell whose telephone number is (703)305-8580. The examiner can normally be reached on Monday - Friday 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (703)308-0538. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-7239 for regular communications and (703)746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Walter Russell Swindell
Patent Examiner
Art Unit 2125

WRS
January 28, 2003



LEO PICARD
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